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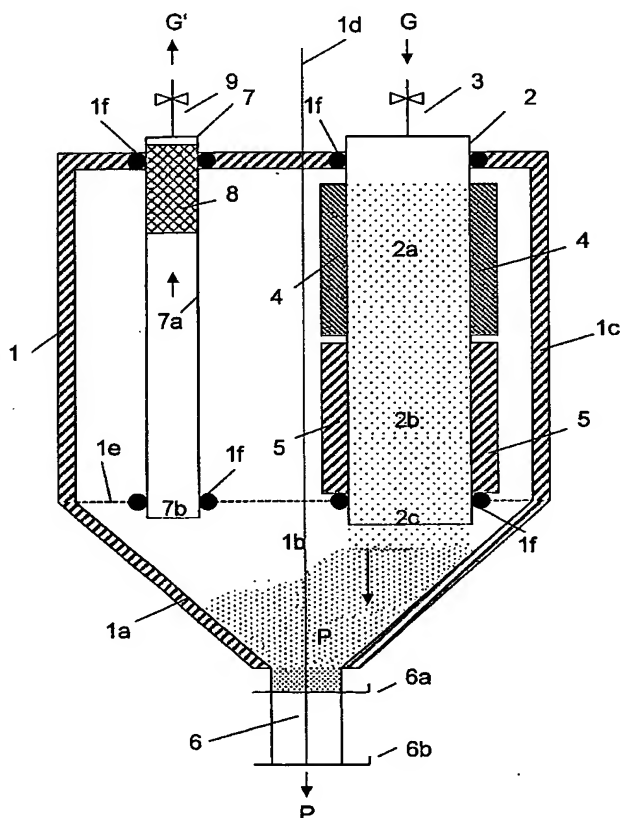
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(54) Title: **DEVICE AND PROCESS FOR THE DEPOSITION OF ULTRAFINE PARTICLES FROM THE GAS PHASE**



(57) Abstract: The present invention relates to a device for the thermal decomposition of volatile compounds and deposition of particles which are then formed, which includes at least the following characteristic features a pressure vessel (1), at least one reaction tube (2), the open end (2e) of which extends into the pressure vessel and the other end of which is located outside the pressure vessel and is provided with a gas feed (3), the longitudinal axis of the reaction tube is oriented in the direction of gravity and parallel to the longitudinal axis of the pressure vessel (1d), and the reaction tube can be heated (2a) on the gas inlet side and cooled (2b) on the gas outlet side, the pressure vessel (1), in its lower part, has a collection cone (1a), the open end of the reaction tube(s) (2c) extending into the gas space of the collection cone (1b), the collection cone (1a) is connected to an outlet lock (6) for powder (P), and a gas outlet unit (7), which is equipped with a gas guide (7a), the gas inlet region (7b) of which is in communication with the gas space (1b) of the collection cone (1a), a filter system (8) and a gas outlet (9), which is located outside the pressure vessel.

WO 2005/054130 A1



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